CLAIMS

1. A method of fullerene separation comprising the steps of:

bringing a fullerene mixture into contact with an amine A in a solvent to form a complex of a specific fullerene contained in the fullerene mixture with the amine A, the fullerene mixture comprising any two or more of C60, C70 and higher fullerenes having greater than 70 carbon atoms, the amine A having two or more nitrogen atoms; and

separating the complex from a solution in which fullerenes not forming the complex are dissolved.

2. The method of fullerene separation according to claim 1, wherein the complex is insoluble in the solvent.

3. The method of fullerene separation according to claim 1 or 2, wherein the complex is dissociated into the specific fullerene and the amine A to obtain the specific fullerene.

4. The method of fullerene separation according to claim 3, wherein the dissociation of the complex is carried out by bringing the complex into contact with an acid.

5. A method of fullerene separation comprising:

a first process of bringing a fullerene mixture comprising C60, C70 and higher fullerenes having greater than 70 carbon atoms into contact with an amine B having two or more nitrogen atoms in a solvent to generate a first complex formed by the higher fullerenes and the amine B;

a second process of separating the first complex from a first solution in which the C60 and the C70 are dissolved;

a third process of bringing the first solution into contact with an amine C having two or more nitrogen atoms to obtain a second complex formed by the C70 and the amine C; and

a fourth process of separating the second complex from a second solution in which the C60 is dissolved.

6. The method of fullerene separation according to claim 5, wherein the first and the second complexes are insoluble in the solvent.

7. The method for fullerene separation according to claim 5 or 6, wherein the first complex is dissociated into the higher fullerenes and the amine B to obtain the higher fullerenes.

8. The method of fullerene separation according to claim 7, wherein the dissociation of the first complex is carried out by bringing the first complex into contact with an acid.

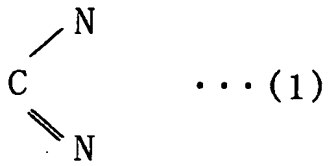
9. The method of fullerene separation according to one of claims 5 to 8, wherein the second complex is dissociated into the C70 and the amine C to obtain the C70.

10. The method of fullerene separation according to claim 9, wherein the dissociation of the second complex is carried out by bringing the second complex into contact with an acid.

11. The method of fullerene separation according to one of claims 1 to 4, wherein the amine A has a substructure in which the two nitrogen atoms are bonded through one atom.

12. The method of fullerene separation according to one of claims 5 to 10, wherein each of the amines B and C has a substructure in which the two nitrogen atoms are bonded through one atom.

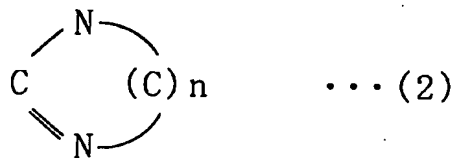
13. The method of fullerene separation according to claim 11 or 12, wherein each of the amines having the substructure in which the two nitrogen atoms are bonded has an amidine structure represented by a formula (1).



$\cdots(1)$

14. The method of fullerene separation according to claim 13, wherein each of the amines having the amidine structure has a cyclic amidine structure represented by a

formula (2).



$\cdots(2)$

(n is an integer of 2 or more.)

15. The method of fullerene separation according to claim 14, wherein each of the amines having the cyclic amidine structure is any one of 1,8-diazabicyclo[5.4.0]undec-7-ene and 1,5-diazabicyclo[4.3.0]non-5-ene.

16. A complex comprising a fullerene and an amine having an amidine structure.

17. The complex according to claim 16, wherein the fullerene has greater than 70 carbon atoms.

18. The complex according to claim 16 or 17, wherein the amine is any one of 1,8-diazabicyclo[5.4.0]undec-7-ene and 1,5-diazabicyclo[4.3.0]non-5-ene.